INSTITUTE *of* STATISTICS
Oxford

Bulletin Vol. 12 *March, 1950* *No. 3*

AMERICAN TOURIST EXPENDITURE AND THE EUROPEAN BALANCE OF PAYMENTS

The importance of American tourist expenditure has always been understood on the Continent and this country is gradually realizing that it has sadly neglected one of its best exports.

> ' Tourism is the one item in the national balance of payments which shows together with a deficit in soft-currency countries, a large dollar surplus and is indeed one of Britain's biggest dollar-earning activities. It has, moreover, the advantage that no increase in its earnings, however sensational, is likely to arouse the activities of any American tariff lobby.'[1]

During 1948, Great Britain received \$56 million[2] from her American visitors, more than she obtained from her exports of Spirits \$38 million, China \$2.5 million, Machinery \$25 million or Vehicles \$30 million.[3] Expenditure in Europe amounted to \$258 million.[4] Clearly, American tourist expenditure can play an important part in providing urgently needed dollars. The purpose of this paper is to examine the possibility of an increased flow of dollars to Europe in the form of tourist expenditure during the next few years.

UNITED STATES TOURISTS' EXPENDITURE IN EUROPE

Tourists' expenditures are a form of direct consumers' outlay. The desire for foreign travel rests primarily on previous education, local and national habits and on the effectiveness of advertising and travel propaganda. Political disturbances at home or abroad tend to reduce the desire to visit foreign countries. Clearly it is impossible to estimate the effect of these factors on the future volume of tourist traffic to Europe; the effect of a threat of war and unsettled political conditions can never be measured before the event, and there are insufficient statistics to show the influence of the volume and effect of propaganda and advertising.

The incomes of the tourists in any nation depend, in the long run, on the general productive efficiency of the country, and on the distribution of income and property. In the short run, the incomes of these people very largely reflect business conditions. The trade cycle considerably affects the volume of tourist traffic as can be seen from Table I.

---

[1] *The Economist*, June 18th, 1949.

[2] Travel Association of Great Britain and Northern Ireland, 21st Annual Report, March 1949, p. 10.

[3] *Board of Trade Journals.*

[4] E. W. Wimble, *Western Europe's Tourist Trade* 1948 (*a*) London, 1949, p. 24.

TABLE I

International Travel Payments of the U.S.A. 1919–1938 (*millions of dollars*)

Year	(1) Total travel payments for oversea travel (a)	(2) Expenditure in Europe & Mediterranean (a)	(3) Europe's share per cent (b) $\left(\frac{(2)}{(1)} \times 100\right)$	(4) Total payments to foreigners (c)	(5) Europe's share of total travel exp. (b) $\left(\frac{(2)}{(4)} \times 100\right)$	(6) Travel to Canada and Mexico (d)	(7) Share of Canada & Mexico % in total expenditure $\left(\frac{(6)}{(4)} \times 100\right)$ (b)
1919	99	75	75				
1920	200	161	80				
1921	202	164	81				
1922	249	203	81				
1923	240	194	80				
1924	280	229	81				
1925	317	261	82				
1926	334	279	83				
1927	361	303	84				
1928	402	331	82	710	47	294	41
1929	421	349	82	771	45	334	43
1930	396	323	81	742	44	322	43
1931	250	198	79	562	35	283	50
1932	177	144	81	423	34	219	52
1933	136	105	77	288	37	129	45
1934	139	102	73	332	31	165	50
1935	152	113	74	400	29	226	57
1936	182	134	73	477	28	268	56
1937	211	160	75	563	28	318	56
1938	180	131	72	516	26	303	59

(a) Excludes payments to Canada and Mexico and emigrant aliens and cruise passengers.
(b) Calculations made by the writer.
(c) Includes payments to Canada and Mexico and emigrant aliens and cruise passengers.
(d) Unrevised figures.

Source: U.S. Dept. of Commerce. Oversea Travel and Travel Expenditures, 1919–39. August Maffry. July 1939.

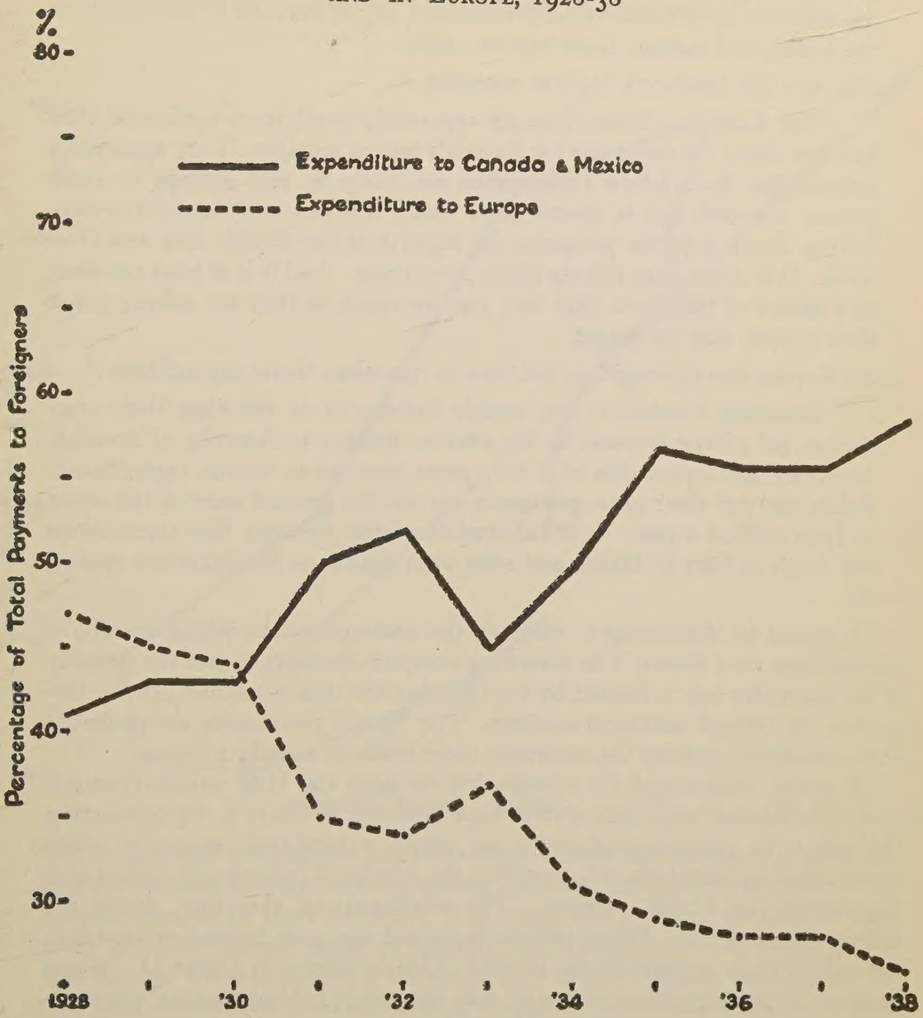
An important aspect of the variations in the volume of U.S. tourists' expenditures is that travel to neighbouring countries, Canada and Mexico, increases during depression years.[1] This is not necessarily at the expense of travel to Europe as it is probable that these countries are to some extent complementary to European travel. Europe has probably a higher prestige appeal to tourists than has a trip to Canada or Mexico, but these countries are within the range of a lower income group than is a European tour. It is possible that as the national income of the United States increases a European trip will come within the range of these people and may perhaps be undertaken.

American statisticians expect an increase in American travel expenditures. There are two principal sets of estimates of the probable economic position of Europe during 1948–51, one made by the Committee of European Economic Co-operation and the other by the U.S. State Department. They agree to within a very small margin on the expected volume of visible trade, but the two estimates of the volume of invisible items differ sharply. According to

---

[1] It is probable that home holiday expenditure, also increase relatively to foreign travel in depression years. Figures of U.S. expenditures on holiday travel at home are unobtainable.

American Tourist Expenditure in Canada and Mexico and in Europe, 1928-38



the European figure, the present deficit on Europe's invisible account will be turned into an annual surplus of $300 million by 1951. But according to the American estimate the invisible surplus in each of the two years 1951 and 1952 should be not $300 million but over $900 million.

The E.C.E. survey for 1948[1] gives the following explanation of the differences in the estimates:

> ' The balance of payments on current account shows a smaller deficit in the State Department's estimates than in that of the O.E.E.C. (at constant

---

[1] Report of the United Nations Economic Commission for Europe, *A Survey of the Economic Situation and Prospects of Europe*, Geneva, 1948, p. 181.

> prices) owing to the fact that the former assumes a steeper increase in the net receipts on invisible items, presumably largely because of differences in the anticipated income from tourist traffic.'

As the late Sir Frederick Ogilvie observed :[1]

> ' The American statisticians are apparently much more optimistic than ours are about the prospects for Europe's tourist receipts. They apparently believe that their fellow countrymen are likely to visit Europe in much greater numbers and to spend more here. It is not as if Americans were talking about, say, the prospects for exports of the British iron and steel trade. It is Americans talking about Americans. And it is at least possible, in a matter of this kind, that they may be right, as they are talking about their people, and we wrong.'

Lord Keynes also envisaged an increase in American travel expenditure :[2]

> ' American forecasters are mainly influenced in reaching their conclusion (of a large increase in the adverse balance to America of invisible items) by the expectation of a very great increase in tourist expenditure. Before the war their gross payments out on this ground were of the order of $300 million a year. It is believed that after this war this expenditure will reach at least $1 billion and even such figures as $2 billion are spoken of.'

It would be interesting to discover the assumptions on which the above calculations were based. The following analysis attempts to test the validity of the estimates but is limited by the fact that the data available[3] are too imperfect for refined statistical analysis. The figures themselves are probably auto-correlated, making the estimates more liable to sampling errors.

A scatter diagram of the relationship between the U.S. national income and U.S. tourists' expenditure in Europe is shown in Chart I. By connecting the points in chronological order we obtain a hysteresis curve, in other words there appears to be a lag between the receipt of income and consequent expenditure on tourist services. The relationsip is, therefore, tested for different period lags. When income is lagged one year behind expenditure the relationship appears to be linear.[4] This is shown in Chart II. When income is lagged two years, or more than two years, behind tourists' expenditure the relationship ceases to be linear.[5]

However, it seems probable that the level, and possibly the rate of change, of the National Income of previous years would to some extent determine tourists' expenditure in Europe because a trip to Europe is relatively expensive

---

[1] Sir F. Ogilvie, *The Importance of Travel as a Factor in International Trade.* Report of a lecture held at the Royal Empire Society, September, 1948, p. 10.

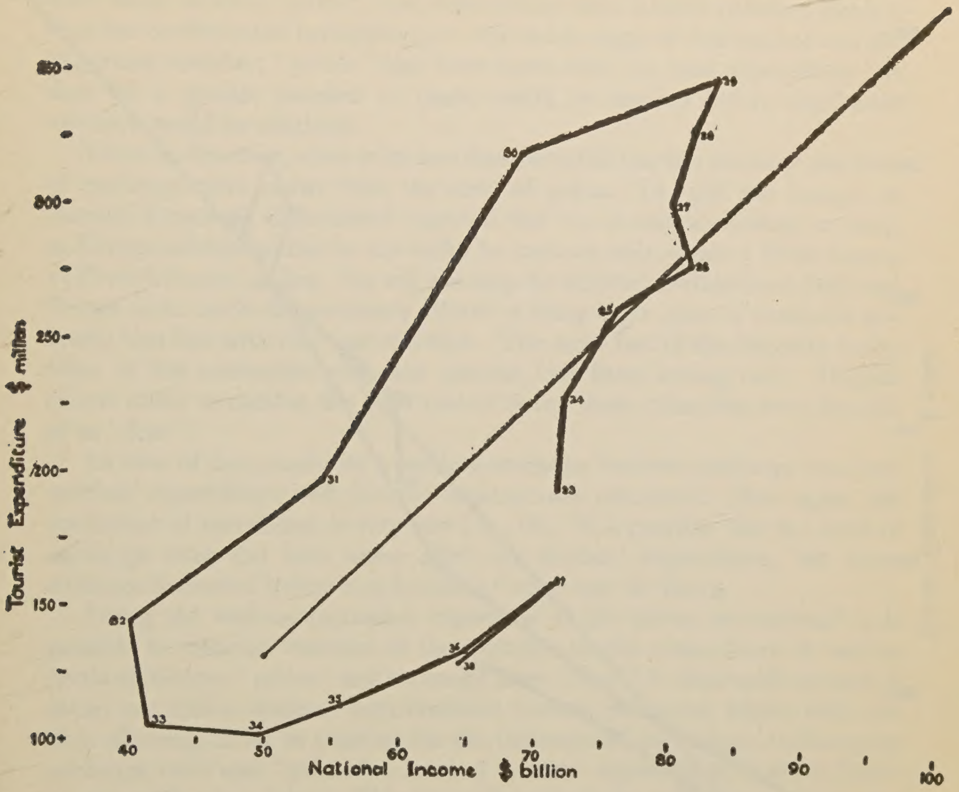
[2] Lord Keynes. *Economic Journal,* June 1946, p. 180.

[3] U.S. Department of Commerce : *Oversea Travel and Travel Expenditures* 1919–1938, by August Maffry. The best and indeed the only full account of travel by Americans in the inter-war period is found in this report. Figures of U.S. disposable income were obtained from the U.S. Department of Commerce periodical, *Survey of Current Business.*

[4] The coefficient of correlation is high (+ .96).

[5] Coefficient of correlation, income lag of two years (+ .84).

I. RELATIONSHIP BETWEEN AMERICAN NATIONAL INCOME AND AMERICAN TOURISTS' EXPENDITURE IN EUROPE, 1923-38



and might well be financed out of savings. Thus the relationship between tourists' expenditure and moving averages of the U.S. National Income over a varying number of years is tested. It is found that an index of three or four years gives the closest linear fit.[1] Thus this relationship does not disprove that tourists when considering the magnitude of their holiday expenditure do take into account the level and rate of change of their incomes over the past three or four years.

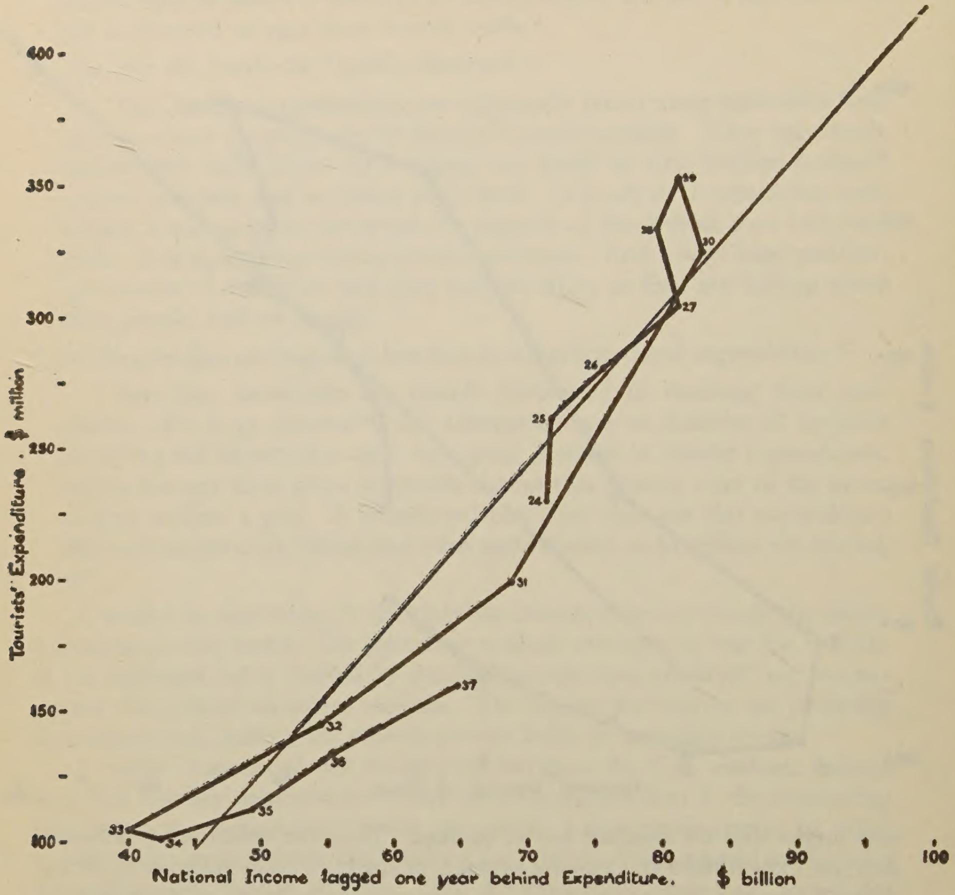
When U.S. disposable income is substituted for National Income and lagged one year behind expenditure, the relationship remains linear but the co-efficient of correlation is slightly less.[2] This might suggest that tourist expenditure is slightly more sensitive to the changes in confidence associated with fluctuations in business activity than to actual changes in personal

---

[1] Coefficients of correlation : Income averaged over two years (+ .89). Income averaged over three years (+ .96). Income averaged over four years (+ .96). Income averaged over five years (+ .90). Income averaged over six years (+ .87).

[2] Coefficient of correlation, U.S. Disposable Income lagged one year and Tourists' Expenditure (+ .93).

II. Relationship between U.S. National Income (lagged one year) and American Tourist Expenditure in Europe, 1924-37



incomes, although the correlation with corporate profits is even less.[1] The differences are too small to be significant.

The coefficients of correlation between income, however defined, and tourists' expenditure are all high (+.80 to + .96), possibly high enough for one to assume that the income of the year, or perhaps of two or three years before, is the only important variable.

However, the costs of travel must affect the value of travel expenditure. They would fail to do so only if the American demand for tourist services were of unit price elasticity, which is unlikely.

The cost of travel to Europe has been tentatively estimated for the inter-war years. An index of the exchange rates of the principal European countries[1] was calculated, and the relevant cost-of-living indices were divided by their exchange rate indices to obtain the ' price ' or cost of travel. A partial correlation between ' prices ' and expenditure with income constant yields a very low coefficient of correlation (+ .16) which suggests that income was the important variable; ' prices ' may have some effect on total expenditure but data for a greater number of years would be needed before conclusive evidence could be obtained.

---

[1] Coefficient of correlation, Corporate profits lagged one year and Tourists' Expenditure (+ .88).

There is, however, some evidence that potential tourists consider the level of exchange rates rather than the level of prices. In 1936 the League of Nations Economic Committee[2] reported that 'An American wishing to come to Europe calculates that for his dollar he can now only obtain 3 Swiss francs, 15 French francs, 12 lira. He will not enquire whether Switzerland, Italy and France have made the necessary efforts to bring their costs of transport and hotels into line with this new situation. The mere fact of the disparity in the value of the currencies will even prevent him from setting out '. Despite efforts made to combat the high cost of living these countries were thought of as ' dear '.

In view of this possibility a partial correlation between exchange rates and tourists' expenditure with income constant was calculated. Here again, the coefficient of correlation is very low (+ .18). It is possible that the level of exchange rates did have some effect on tourists' expenditure, but more evidence is needed before conclusions of value can be drawn.

Using the various regression equations of the above correlations[3] it is possible to make an estimate of the probable tourist expenditure at various levels of income, ' prices ' and exchange rates. At a U.S. disposable income of about 200 billion dollars,[4] with National Income, of course, higher still, and after allowing as far as possible for the influence of the changes in European exchange rates and ' prices ', a level of tourists' expenditure of about $950–$1,200 million is reached. This expenditure includes payments to European shipowners.

Thus it would appear that the figure of $1 billion suggested by Keynes[5] and the estimate of the U.S. Department of Commerce[6] are both valid, but that a tourist expenditure of $2 billion would be possible only if the American disposable income were of the order of $350–$400 billion and National Income about $400–$450 billion, or if a change in the consumption pattern in favour of tourist expenditure to Europe took place. This is perhaps considered likely as a recent speaker put forward the view:[1] 'Americans hope that during the life of the Marshall Plan, which will come to an end in 1952, the proportion of travel money may amount to between two and two-and-a-half billion dollars.' Moreover in the inter-war years Europe's proportion of total travel expenditure increased when the U.S. National Income was rising, while that of Canada and Mexico fell.

---

[1] France, Switzerland, Italy and Great Britain. Germany was excluded from the index as she had special ' tourist ' rates of exchange.

[2] League of Nations Economic Committee, Geneva 1936. *Survey of Tourist Traffic considered as an International Economic Factor.*

[3] (*a*) Tourists' expenditure, U.S. Disposable Income and European Prices. $y=7.37x+.52z$.

(*b*) Tourists' expenditure, U.S. Disposable Income and European Exchange Rates. $y = 6.16x + .46z$. One multiple correlation alone would not be sufficient as a tourist would consider either ' prices ' or exchange rates.

(*c*) National Income lagged one year behind expenditure. $y = 5.77x$. An extrapolation for post-war years based on pre-war data is not conclusive. *cf.* Woytinsky, Friend.(A statistical attack on the American post-war models and a counter-attack). *Review of Economic Statistics*, 1946, p. 1 and p. 208.

[4] U.S. Disposable Income was about $190 billion in 1948 and was higher during 1949. *Vide Survey of Current Business*, U.S. Department of Commerce.

[5] Keynes' figures were gross, but in the years 1919–1938, 75–85 per cent of U.S. gross oversea expenditure came to Europe.

[6] Tourists' expenditure in Europe $800–$1,000 million. Cited in E. W. Wimble (*b*). *European Recovery* 1948–51 *and the Tourist Industry*, London, 1948, p. 7.

Although U.S. disposable income was high, tourists' expenditure in Europe in 1948 was only $258 million. The figure of $1,000 million must be considered to be in the nature of a target. The number of American travellers wishing to visit Europe is estimated to be 750,000 per annum.[2] To reach a target of $1,000 million would mean an average expenditure per head of $1,333 at post-devaluation exchange rates.[3] At present, expenditure per head inclusive of transport charges is estimated to be about $1,015[4] to $1,600[5] at pre-devaluation exchange rates. However, American tourists crossing the Atlantic numbered only slightly more than 200,000 in 1948.[6] It is unlikely that transportation was the limiting factor as the North Atlantic passenger shipping capacity was estimated to be 386,010 berths[7] in 1948. To this must be added an air capacity of 169,500 berths[7]—a total capacity on North Atlantic passenger routes of 555,510 berths. Passenger shipping capacity in the summer months, from May to October was estimated to be 55 per cent of the total capacity, that is, 212,305 berths, and the air capacity available in these months was about 65 per cent of the total, that is, 110,175 berths, a total capacity of 322,480 berths. It is estimated that transport capacity both sea and air, will increase in the future and by 1951 will be about 760,000[8] berths, but in the holiday season—only 450,000 berths will be available. Transport capacity should therefore be sufficient to enable the target to be reached, if tourists can be induced to come in the Spring and Autumn as well as in the holiday season. Otherwise, to reach the target of $1,000 million would mean an average expenditure per head of $2,222, an increase of about one-third over the estimated maximum present expenditure in Europe.

Tourist Traffic to Britain

What proportion of Europe's total dollar receipts can Britain hope to earn ? Before the war, in the years for which statistics are available,[9] Britain

[1] Mr. Whitney, Under-Secretary of the U.S. Department of Commerce, September, 1948. Press Conference.

[2] Number of tourists who travelled to Europe and U.S. Disposable Income 1923–1938. $y = 3.8129x$.; *cf.* Beddington-Behrens, *Tourist Traffic as a Means of Reducing the Dollar Gap.* (Paper read before the Hague Conference 1948).

[3] The effect of the recent devaluation cannot be fully estimated using regression equations based on pre-war data. It is possible that a change in exchange rates of this magnitude—33 per cent—may induce many more tourists both to visit Europe and to spend more in Europe.

[4] E. W. Wimble (*b*) *op. cit.*, p. 7.

[5] Beddington-Behrens *op. cit.*

[6] E. W. Wimble (*a*) *op. cit.*, p. 24.

[7] E. W. Wimble (*a*) *op. cit.*, p. 30.

[8] E. W. Wimble (*a*) *op. cit.*, p. 31.

[9] *Britain's Tourist Dollar Receipts. $ million.*

1935	18.8	1937	21.8	1936	24.9	1938	18.6

received about 18 per cent of total American expenditure in Europe. This proportion had increased to 27 per cent by 1948,[1] when Britain received a net total of $33 million[2] out of a total American expenditure, excluding transport payments, of $121 million.[3] The proportion of the numbers of Americans who came to Britain before the war was about 34 per cent. This proportion had also increased. In 1948, about 87,000[4] Americans visited Great Britain—that is 44 per cent of the total American visitors to Europe. If Britain can maintain these proportions as the number of American tourists to Europe increases, and as the amount spent approaches the target of $1 billion, she could receive from her American tourists about 270 $million and the number of tourists could increase to 330,000.

It is clear that Europe's tourist industry can make a substantial contribution to reduce the dollar shortage, providing the U.S. National Income remains buoyant. The dollar deficit is provisionally estimated to be about $1.3 billion when Marshall Aid ceases.[5] Tourist receipts from Americans are expected to be $463 million. Thus, the additional $537 million would offset approximately 40 per cent of Europe's dollar gap. It is estimated that Britain will have a dollar deficit of $291 million in 1952–53.[6] Tourist receipts are expected to offset the service of the U.S. and Canadian Loans ($190 million) and the service of E.C.A. Loans. The possible additional receipts of $80 million could therefore offset approximately 28 per cent of the expected dollar gap;[7] but, all sections of the economy will have to take steps to render it attractive to American tourists to come to Britain and to obtain value for their money.

KATHLEEN M. LONGMORE.

---

[1] This increase is perhaps greater than the use of regression analysis based on pre-war figures would lead us to expect.

[2] Wimble (*a*) *op. cit.*, p. 25.

[3] This total of $121 million differs from the total dollar earnings of Europe of $258 million because it excludes payments to European transatlantic carriers and because of the difficulty of measuring and apportioning the expenditure of American alien residents travelling to Europe. Such visitors often spend long periods and considerable amounts of money when visiting their homeland.

[4] Travel Association 21st Annual Report, p. 8. Visitors ' in transit ' have been deducted form the total given here.

[5] O.E.E.C. *Interim Report on the European Recovery Programme, Vol. I*, Paris, December 1948, p. 73. However, it is considered in the same report that the dollar shortage will probably be about $3 billion as the forecasts of exports and invisible earnings were thought to be unduly optimistic.

[6] Cmd. 7572. *European Co-operation*. London, 1948, p. 42.

[7] No allowance has been made for the dollar ' import content ' of tourist receipts. This would reduce the estimated net receipts slightly. The total ' import content ' of British exports is about 20 per cent, *cf.* Sir W. Beveridge, *Full Employment in a Free Society*, London, 1944, p. 212. R. G. D. Allen ' Import content ' of total consumers' expenditure is about 20 per cent. *London and Cambridge Economic Service Bulletin*, Nov. 1949, p. 127., and that of tourist receipts is estimated to be about 12 per cent.

THE NATIONAL INCOME IN 1949.

(All Tables are in annual rates, £ millions. For a full description of methods used see The Bulletin *for October and December 1949. We want to stress that different sections of the estimates have very different margins of error, and that interpretation should not be attempted without examination of the extent to which the figures concerned are based on incomplete information or extrapolation. There have been minor revisions to previous estimates throughout).*

We are attempting in this paper to make some preliminary estimates of the national income in 1949. In view of the paucity of information available and the possibility that the next official estimates will raise the aggregate for each year substantially, the main use of these annual estimates is to provide a rough indication of the rate at which components of the national income are changing.

The usual quarterly estimates are also shown. Since revisions have made little difference to the 1948 estimates, these have been omitted this time. A complete revision, in the light of information to be published in the next National Income White Paper, will be published in due course.

It seems from Tables I and II that the National Income increased by some £600–£700 millions from 1948 to 1949, of which slightly less than a half was due to rising factor cost and more than a half to a ' real ' increase, the real increase being of about the same order as the increase from 1947 to 1948. Judged in either financial or ' real ' terms, Agriculture and Manufacturing appear to have continued to grow relative to other sectors. The quarterly estimates indicate that the manufacturing sector was continuing to go relatively ahead in the autumn. However, there are some slight signs that the aggregate is ceasing to rise so rapidly, at least when measured at current factor cost.

This is reflected in a noticeable slowing in the growth of different types of income in Table III. In particular the distribution of incomes does not appear any longer to be changing rapidly, though Profits continued to gain slightly and Salaries to fall further back up to the middle of the year.

On the foreign trade side, the estimates of invisible items for the third quarter are particularly uncertain, as we have no indications of the effects which devaluation may have had. A small rise in prices has been assumed, so that both sides of the invisible balance are shown as increasing in value at a rather faster rate than in the previous three quarters.

The behaviour of the current account deficit in the tables may at first sight seem paradoxical. So far as the overall deficit is concerned, the Chancellor of the Exchequer, in his review of 1949, stated that it was expected to be about the same as in 1948 (*i.e.* of the order of £100 million). The basis of this estimate was that the ' crude ' visible deficit, as shown by the uncorrected Board of Trade statistics, was almost exactly the same as in 1948, while the invisible balance was apparently not expected to be very different. In our figures, the visible deficit is estimated as appreciably smaller than in 1948. This is explained by the fact that we assume a reduction in the gap between the export figures as given by the Board of Trade, and those

TABLE I

National Income. At current factor cost, seasonally corrected

	1948	1949	*1949 as % of 1948*	1949			
				I	I	III	IV
Agriculture	530	610	*115*	560	620	650	620
Manufacturing	5290	5810	*110*	5600	5840	5880	6020
Services	3170	3280	*103*	3240	3270	3300	3300
Total Business	8990	9700	*108*	9400	9730	9830	9940
Government	1030	1040	*101*	1040	1040	1040	1030
Other	480	500	*104*	490	490	500	500
Gross National Income	10500	11240	*107*	10930	11260	11370	11470
Less Depreciation	825	915	*111*	880	900	930	950
Net National Income	9675	10325	*107*	10050	10360	10440	10520

TABLE II

*National Income. At end-*1948 *factor cost, seasonally corrected*

	1948	1949	*1949 as % of 1948*	1949			
				I	II	III	IV
Agriculture	590	650	*110*	620	650	670	640
Manufacturing	5410	5780	*107*	5600	5800	5780	5940
Services	3220	3240	*101*	3230	3240	3260	3250
Total Business	9220	9670	*105*	9450	9690	9710	9830
Government	1040	1030	*99*	1040	1040	1030	1020
Other	480	500	*104*	490	490	500	500
Gross National Income	10740	11200	*104*	10980	11220	11240	11350
Less Depreciation	825	915	*111*	880	900	930	950
Net National Income	9915	10285	*104*	10100	10320	10310	10400

TABLE III

Distributive Shares. At current factor cost, seasonally corrected

	1948	1949	*1949 as % of 1948*	1949			
				I	II	III	IV
Wages	3975	4245	*107*	4170	4220	4280	4310
Salaries	1850	1955	*106*	1910	1935	1960	2000
Forces' Pay	245	215	*88*	225	220	215	210
Rent	430	440	*102*	435	440	440	445
Profits and Interest	(3175)	(3470)	*109*	(3310)	(3545)	(3545)	(3555)
Net National Income	9675	10325	*107*	10050	10360	10440	10520

given in the White Paper on the balance of payments. For the year 1948, the White Paper figure was 6 per cent below that of the Board of Trade; for the four quarters of 1949, we have taken correction factors of 3 per cent, 1 per cent, zero, and 6 per cent—the low figures for the second and third quarters reflecting the falling away of exports which occurred then, the high

Table IV

Foreign Trade. At current prices, not *seasonally corrected*

	1948	1949	*1949 as % of 1948*	1949			
				I	II	III	IV
Visible Imports	1770	1935	*109*	1830	1985	1935	1985
Invisible Imports ...	480	565	*118*	530	545	600	590
Total Payments	2250	2500	*111*	2360	2530	2535	2575
Visible Exports	1555	1800	*116*	1850	1775	1740	1825
Invisible Exports ...	585	645	*110*	600	625	660	690
Total Receipts	2140	2445	*114*	2450	2400	2400	2515
Net Export Surplus ...	—110	—55	*50*	+90	—130	—135	—60

figure for the last quarter reflecting the renewed increase in exports which followed devaluation. Because of this, we arrive at a lower correction factor for the year as a whole, and therefore a smaller visible deficit. On the other hand, a rather smaller *surplus* on invisible account is shown in the tables, in spite of the Chancellor's statement, since the high positive balance during the second half of 1948 was due largely to certain non-recurrent receipts.

The distribution of the deficit between the four quarters, shown in Table V, is partly explained by the different correction factors which have been applied to the export figures;[1] this is the chief explanation for the low export figure for the last quarter, and the relatively high figures for the second and third quarters. It should be stressed again that no allowance was made for any rise in the correction factor caused by postponement of payments before devaluation, or for any corresponding fall in the fourth quarter; if it were possible to make allowance for this, the picture might well be very different. (We presume that the Government will publish separate estimates for the last two quarters of 1949 in the coming Balance of Payments White Paper). To a certain extent, the rather gloomy appearance of the fourth quarter is also accounted for by the adverse movement in the terms of trade (which is

Table V

Foreign Trade. At current prices, seasonnally corrected

	1949			
	I	II	III	IV
Visible Imports	1910	1900	1905	2030
Invisible Imports	540	555	565	610
Total Payments	2450	2455	2470	[illegible]40
Visible Exports	1845	1790	1780	1785
Invisible Exports	605	625	650	700
Total Receipt	2450	2415	2430	2485
Net Export Surplus	—	—40	—40	—155

---

[1] The estimates of visible trade differ from those previously given, as new seasonal correction factors have been used.

brought out by a comparison with Table XI). It is perhaps worth noting that there has so far been no significant rise in export prices since devaluation; one might have hoped that the inevitable rise in import prices would be partly offset by higher sterling prices in countries which have not devalued to the same extent.

The consumption estimates for the fourth quarter of 1949 show a marked increase over the third quarter. Spending is normally heavy in the last quarter of the year, but the increase in our seasonally corrected estimates indicates a higher level of expenditure than is usual, spending on household goods and clothing being particularly high.

Comparing 1949 with 1948, it seems that the majority of the increased expenditure has been absorbed in price increases, but that there has also been a continuing upward movement in 'real' consumption, which must reflect an improvement in supply conditions. It is interesting to note that our estimate for total consumption at end-1948 prices is very close to that made in the Economic Survey at the beginning of the year, though this appears to be the result of two compensating errors, real consumption of food having increased less, and real expenditure on clothing and household

TABLE VI

Consumption. At current prices, seasonally corrected

	1948	1949	*1949 as % of 1948*	1949			
				I	II	III	IV
Food	2180	2350	108	2160	2335	2470	2425*
Drink	760	715	94	675	725	735	735
Tobacco	770	760	99	725	770	815	745
Rent and rates	600	615	103	610	610	615	615
Fuel and light	350	360	103	360	355	335	380
Household goods	515	570	111	550	565	555	615
Clothing	855	945	111	950	960	880	990
Other	1975	2000	104	1980	1990	1965	2075
Total	8005	8315	104	8010	8310	8370	8580

* A very provisional estimate.

TABLE VII

*Consumption. At end-*1948 *prices, seasonally corrected*

	1948	1949	*1949 as % of 1948*	1949			
				I	II	III	IV
Food	2175	2225	102	2160	2240	2300	2200*
Drink	775	755	97	675	775	780	780
Tobacco	780	760	97	725	770	815	745
Rent and rates	600	610	102	610	610	615	610
Fuel and light	355	360	101	355	360	340	375
Household goods	520	575	111	550	565	560	620
Clothing	900	925	103	940	940	855	980
Other	1980	1980	100	1975	1965	1940	2040
Total	8085	8190	101¼	7990	8225	8205	8350

* A very provisional estimate.

goods having increased more than forecast in the Survey. In the distribution of expenditure, the fall in the proportion devoted to drink and tobacco has continued, if anything quickening, while food (8 per cent rise in terms of value), household goods (11 per cent) and clothing (11 per cent), have relatively gained. In real terms, however, the change was not so marked because of the fall in drink prices after the last Budget and the price increase in food and clothing. The increase in real consumption of the latter two groups is in fact only very little higher than the average for all groups. Household goods have not greatly changed in price, and for them the ' real ' increase is comparable to the ' value ' increase.

It appears from Table VIII that there was late in 1949 a further fall in personal savings and thus in inflationary pressure.[1] The rise in personal income slowed up and was in fact, on our tentative estimates, less than the increase in consumption goods available. On this measure inflationary pressure at the turn of the year was the lowest since the war. However, despite the fall in savings as 1949 went by, the savings ratio for the year seems to have been slightly above that for 1948.

TABLE VIII

Aggregate Personal Income. At current prices, seasonally corrected

	1948	1949	*1949 as % of 1948*	1949			
				I	II	III	IV
Consumption	8005	8315	104	8010	8310	8370	8580
Direct Taxes	1370	1550	*113*	1490	1530	1585	1585
Savings	(215)	(265)	(123)	(415)	(260)	(280)	(110)
Aggregate Personal Income	9590	10130	*105*	9915	10100	10235	10275

The left hand side of Table IX suggests that changes in the export surplus ceased to dominate the pattern of resources after 1948. Current Government spending rose substantially between the two years, for the first time since demobilisation began. There are, however, indications from the Supply issues that the rate of increase became less steep during the year

TABLE IX

National Expenditure. At current prices, NOT *seasonally corrected*

	1948	1949	*1949 as % of 1948*	*1949*	1949		
				I	II	III	IV
Consumption	8005	8315	104	7605	8230	8555	8935
Govt. current spending	1915	2085	*109*	2020	2065	2110	2140
Net Investment	(1515)	(1635)	(108)	(2005)	(1845)	(1370)	(1285)
Exports	2140	2445	*114*	2450	2400	2400	2515
Less Imports	—2250	—2500	*111*	—2360	—2530	—2535	—2575
Net National Product	11325	11980	*106*	11720	12010	11900	12300
Less net Indirect Taxes	—1650	—1655	*100*	—1520	—1670	—1730	—1690
Net National Income ...	9675	10325	*107*	10200	10340	10170	10610

---

[1] See the discussion on Inflation in THE BULLETIN for January–February.

(see Tables X and XI).[1] Consumption expenditure turned upward during the year after a remarkably long stability. The most interesting feature of the year was however the sharp rise in capital investment. Since this is a residual, the extent cannot be at all accurately determined. Our belief is that the production indices and consumption figures cannot be reconciled without some allowance for a higher rate of investment.[2]

TABLE X

National Expenditure. At current prices, seasonally corrected

	1949			
	I	II	III	IV
Consumption	8010	8310	8370	8580
Govt. current spending	2020	2065	2110	2140
Net Investment	(1585)	(1685)	(1710)	(1645)
Exports	2450	2415	2430	2485
Less Imports	—2450	—2455	—2470	—2640
Net National Product	11615	12020	12150	12210
Less net Indirect Taxes	—1565	—1660	—1710	—1690
Net National Income	10050	10360	10440	10520

TABLE XI

*National Expenditure. At end-*1948 *prices, seasonally corrected*

	1948	1949	*1949 as % of 1948*	1949			
				I	II	III	IV
Consumption	8085	8190	101¼	7990	8225	8205	8350
Govt. current spending	1950	2070	*106*	2015	2055	2100	2105
Net Investment	(1640)	(1750)	(107)	(1650)	(1755)	(1835)	(1720)
Exports	2205	2440	*111*	2460	2420	2425	2450
Less Imports ...	—2310	—2500	*108*	—2440	—2470	—2565	—2535
Net National Product	11570	11950	*103*	11675	11985	12000	12090
Less net Indirect Taxes...	—1655	—1665	*101*	—1575	—1665	—1690	—1690
Net National Income ...	9915	10285	*104*	10100	10320	10310	10400

We have estimated elsewhere[3] that the rate of fixed capital investment was about the same for 1949 as for 1948. Hence there seems to have been some increase in the rate of stockbuilding. This is also indicated by stock indices for apparel and wholesale textiles.[4] The *Economist* analysis of company balance sheets[5] shows a continued rise in stocks, though not at quite the same rate as in the previous year.[6] Their figures suggest, however, that the greatest increases were in distribution, and in view of their incomplete coverage of this sector the rise in distributive stockbuilding may have outweighed the fall in the *rate* of private stockbuilding elsewhere. In addition there was apparently considerable Government stockbuilding.

---

[1] This does not conflict with the stability of output of the Government sector mentioned above. Sector output excludes, but current expenditure includes, purchases of goods.

[2] The usefulness of our estimates lies mainly in the clues they provide to interesting contrasts between indices.

[3] January–February BULLETIN, section on Investment.

[4] B.O.T.J. 11.3.50, pp. 481, 489. Retail apparel stocks increased from 122 in December 1948 to 152 in December, 1949 (1947=100); wholesale textile stocks from 121 to 128, with a further sharp rise in January, 1950.

[5] Records and Statistics Supplement, 11.2.50, p. 136. Also the issue for 19.11.49.

[6] See the issue of 12.3.49.

We can now see the shape of the period of post-war reconstruction. In the first phase the economy fed its expanding output into increasing fixed capital formation and exports, leaving very little indeed for augmenting total home consumption. The increases in clothing supplies and household goods did not much more than balance the reduction in real purchases of drink, tobacco and petrol. This phase came to an end in the early spring of 1949, with the halting of the export drive.[1] In the second phase supplies for the home market rapidly improved. Total consumption started to increase, but a big part of the rise went into stockbuilding.

The period of distributive stockbuilding, the second phase of our economic recovery, is bound to be short-lived. Its end should permit a temporarily sharper rise in the level of consumption and a quicker easing of inflationary pressure. Further, the very fact of stockbuilding on this scale suggests that inflationary pressure is now relatively weak.[2] This analysis suggests a fall in 1950 of several hundred million pounds in capital investment. This could be either allowed to exert a strong disinflationary influence, probably to the benefit of the resumed export drive, or used for administrative concessions. Even allowing for rises in public spending already envisaged, and the amount necessary to establish a surplus in our overall balance of payments, the *ex-ante* (autonomous) inflationary gap for the coming financial year appears several hundred million pounds smaller than for the current year.

DUDLEY SEERS

In association with P. D. HENDERSON *and* D. G. HOLLAND.

---

[1] The stability shown in Table XI is, however, rather misleading, since it results from the compensating variations in the correction factor used in estimating payments received for exports.

[2] The combination of a weakening of inflationary pressure because of export frustration, and an anticipated general price rise, due to devaluation, creates of course an ideal climate for stockbuilding.

WORKING CLASS HOUSEHOLD EXPENDITURE IN 1948

INTRODUCTORY

Between the spring of 1940 and the summer of 1947, nine surveys into the household expenditure of working-class families were undertaken by the Oxford Institute of Statistics. Household accounts of families with at least one dependent child were obtained each time from a dozen or more towns in England and Scotland. All the helpers in the several towns gave their assistance free, while the housewives were offered a token remuneration of a few shillings for a detailed statement covering their household expenses for a fortnight. It was clear from the beginning that such a survey could not be carried on indefinitely, without a break of at least a few years, and we finally agreed to bring it to a conclusion in 1947. However, having to discontinue these surveys at a time of shortages and rising prices, and when actually more foods were rationed than had ever been the case during the war, seemed very unfortunate, and we were glad to find in six of the towns included in our previous surveys helpers and housewives that were willing to co-operate for another two years.

All but two of our previous surveys had been based on a total of about 150 to well over 200 household accounts. We decided that if the samples for 1948 and 1949 were to be much smaller than these previous ones, every effort should be made to exclude accidental variations from the data supplied by the individual housewife. We therefore asked the housewives to keep their accounts for four consecutive weeks instead of for a fortnight, as in previous years, a request to which nearly all of them agreed.

In 1947, we had received detailed accounts from 163 families in 13 towns; in 1948, families from 6 towns supplied 65 accounts. The fortnightly accounts obtained up to 1947, were usually collected in early summer; but since most of our helpers are university teachers or students they found it impossible to undertake a four weeks' survey at this particular time of year, since it is largely devoted to examinations, which are followed by the long vacation. We therefore transferred our survey in 1948 to a later period, and most of the 65 accounts were kept between the end of August and the beginning of November.

It was natural that we should feel a little doubtful as to the general picture that could be derived from so small a sample; yet when the data for 1948 had been extracted and analysed we found that in all essential aspects our final figures compare well with those derived from the much larger sample for 1947. It remains to be seen whether the material collected in 1949 will yield an equally satisfactory result.

THE STRUCTURE OF THE SAMPLE

We have again subdivided the families of our sample into three main groups : unchanged families, changed families, and new families. Both the unchanged and the changed families also contributed to our survey in 1947;

but whereas the structure of the unchanged families remained the same, that of the changed families underwent some alteration from 1947 to 1948. Table I sets out the geographical distribution of all families for 1948, and compares their structure and some figures of average expenditure obtained from their accounts, with the corresponding data obtained from household accounts of families in the same towns in 1947. It is worth noting how closely the figures of average expenditure in 1947, for the 90 families from the 6 towns and for the whole sample of 165 families from 13 towns, correspond to one another.

In order to make possible direct comparisons between the data obtained from the different household accounts we have again resorted to a standardization of the families in terms of 'man' values; these are estimates of the relative cost of maintaining a person *within the family*. The schedule of these values is given in Table II. Thus the 'man' value per person of a family, or group of families, indicates the relative distribution of adults and children. In Table I, the highest 'man' value per person of the families that supplied accounts in 1948, is that of the 11 families in Southampton and the lowest that of the 7 families in Liverpool; the proportion of person over 14 years old to children being, for the families in Liverpool, 4:3, and for the families from Southampton, 3:1.

Since the full income was stated only by 41 of the 65 families of our sample for 1948,[1] standardized figures of income could not be used for measuring the relative standards of living of all the families, and we employ instead the standardized figures of expenditure on food. These we have found to be far more satisfactory than standardized figures of housekeeping money, since the value of the sum handed over to the housewife depends very much on what main items other than food she is expected to buy with it. Most of the housewives that supplied household accounts paid out of their housekeeping money also for the family's accommodation—*i.e.*, rent, mortgage charges, rates—as well as for fuel and lighting, and also for certain smaller recurrent items, such as insurance and newspapers. But only some of them bought out of their housekeeping money all their own and the childrens' clothing, and very few recorded a substantial outlay on items for the sole use of the earners—*e.g.*, alcoholic drinks, amusements, toilet requisites—except where the housewife was herself the earner.

The distribution according to their standardized expenditure on food, of the 65 families of our sample for 1948 and of the 165 families of the sample for 1947, is shown in Table III. In the two years, the central 50 per cent of the families covered approximately the same range of expenditure, the first quartiles giving in both years the identical outlay on food per 'man' per week, of 13s. 8¾d., and the second quartiles differing from one another by only a halfpenny, the outlay in 1947 being 17s. 10½d., and that in 1948, 17s. 11d.

---

[1] The Visitors were requested to find out the income of each family, if possible, but not to press for this information, since an untruthful answer is worth less than none.

TABLE I

Geographical Distribution of Families

	Total	Unchngd.	Changed	New	Persons per Family	'Man' Value per Person	Food per 'Man' per Week	Rent[1] per Family	Fuel and Lighting per Week
		Number of Families							
1947							s. d.	s. d.	s. d.
(1) Birmingham ...	14	9	1	4	4.9	0.77	15 9¾	11 11	6 11¾
(2) Bolton	13	—	—	13	3.8	0.76	18 0½	10 9	9 9¼
(3) Liverpool	29	10	6	13	5.9	0.78	14 4	13 11¼	9 3
(4) Sheffield	10	3	4	3	5.3	0.78	14 10¾	11 5½	7 9¾
(5) Southampton ...	17	11	—	6	4.3	0.80	16 8	20 3½	9 3½
(6) Swindon	7	5	2	—	3.7	0.83	15 10¼	—	7 8¾
6 Towns, 1947 ...	90	38	13	39	4.9	0.78	15 6¼	13 6¾[2]	8 8¼
13 Towns, 1947 ...	163	55	25	83	5.0	0.77	15 4½	13 3[3]	8 9¼
1948							s. d.	s. d.	s. d.
(1) Birmingham ...	15	11	3	1	4.9	0.78	16 0½	11 4¾	9 6¾
(2) Bolton	15	4	1	10	4.2	0.78	16 10	13 4½	9 6¾
(3) Liverpool	7	2	—	5	6.0	0.72	14 2½	12 7¼	8 1¾
(4) Sheffield	11	7	1	3	4.8	0.80	16 5¼	11 4	8 8
(5) Southampton ...	11	7	3	1	4.4	0.84	14 5¾	19 2¼	10 9½
(6) Swindon	6	4	1	1	3.3	0.83	15 2½	10 3	9 11¾
6 Towns, 1948 ...	65	35	9	21	4.6	0.79	15 8½	12 7[4]	9 6

[1] Excluding the following families living rent free or buying their houses: 1947, 14 out of 90 families (Liverpool 1, Southampton 6, Swindon 7); (1947, 30 out of 163 families); 1948, 19 out of 65 families (Bolton 7, Southampton 7, Swindon 5).

[2] Average for 76 families.

[3] Average for 133 families.

[4] Average for 46 families.

TABLE II

Household Expenditure Scale of ' Man ' Values

Male, 15 years and over	1.00
Female, 15 years and over	0.85
Children : 10—14 years	0.70
6—9 years	0.60
3—5 years	0.50
Under 3 years	0.33

TABLE III

Distribution of Food Expenditure per ' Man ' per Week

	Total Number of		Median		Q_1		Q_3		Average
	Fams.	Persons	Fams.	Persons	Fams.	Persons	Fams.	Persons	p. 'Man'
			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1947	163	818	15 7	15 1½	13 8¾	13 1½	17 10½	17 3½	15 4½
1948	65	300	16 4½	15 2½	13 8¾	12 11	17 11	17 9	15 8½

RELATION BETWEEN INCOME, HOUSEHOLD EXPENDITURE, AND FOOD EXPENDITURE

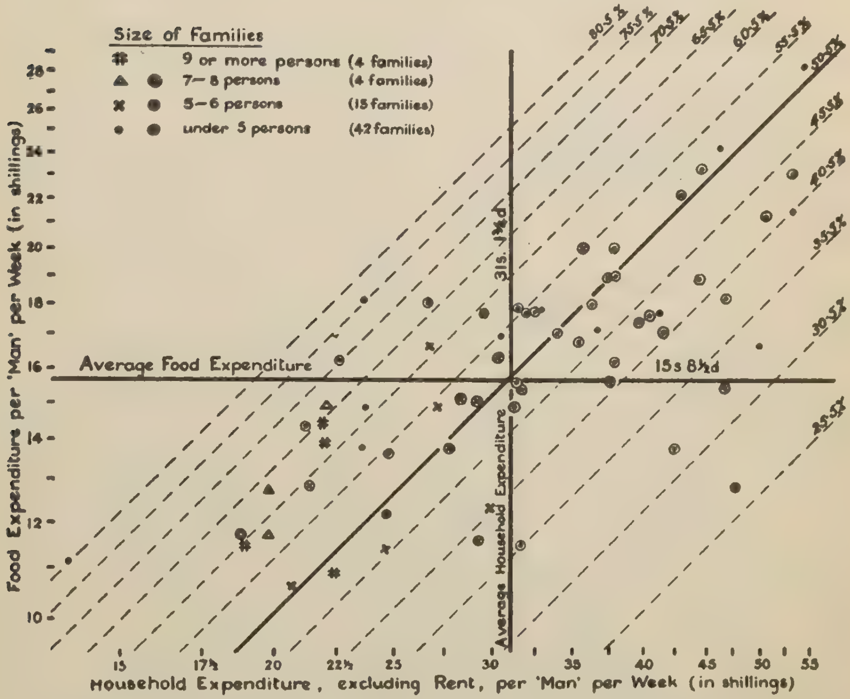
Diagrams A and B picture the relation between food expenditure and household expenditure, and food expenditure and income, as shown in our sample for 1948. We have deducted all expenditure on housing—in these diagrams for short termed ' rent '—from household expenditure as well as from income, before calculating the respective standardized figures; for outlay on housing is an overhead charge that as long as the present housing shortage prevails, is fixed for most families by the accidents of the time when they first acquired their accommodation and the circumstances under which they did so. Hence the expenditure over which a certain amount of choice can be exercised, only represents the residue of income or housekeeping money after covering this cost.

In Diagram A we have chosen different symbols for the families that only stated their household expenditure and for those that also stated their income, since of course only the data obtained from the accounts of these latter families could be utilized for Diagram B, which considers food expenditure in relation to income. Each of these diagrams shows three scales, a vertical one measuring the standardized expenditure on food, a horizontal one measuring the standardized expenditure of housekeeping money excluding cost of housing (Diagram A), or standardized income excluding cost of housing (Diagram B), and a diagonal one expressing expenditure on food as a percentage of the figures shown in the corresponding horizontal scale. The diagonal that cuts through the intersection of the vertical line of average household expenditure, or income, and the horizontal line of average food expenditure, represents the average percentage for the whole group of families—65 families in Diagram A and 41 families in Diagram B. The average food expenditure of this latter group was found to be higher by 8d. per ' man ' per week than that of the former. The vertical scales in

DIAGRAM A

HOUSEHOLD EXPENDITURE, EXCLUDING RENT, & FOOD EXPENDITURE

(Per 'Man' per Week. Log. Scale. 65 Families)



[The symbols surrounded by circles indicate the families that also stated their full income. The percentage figures on the diagonals measure the proportion of the household expenditure, *excluding all expenditure on housing*, that went to purchase food.]

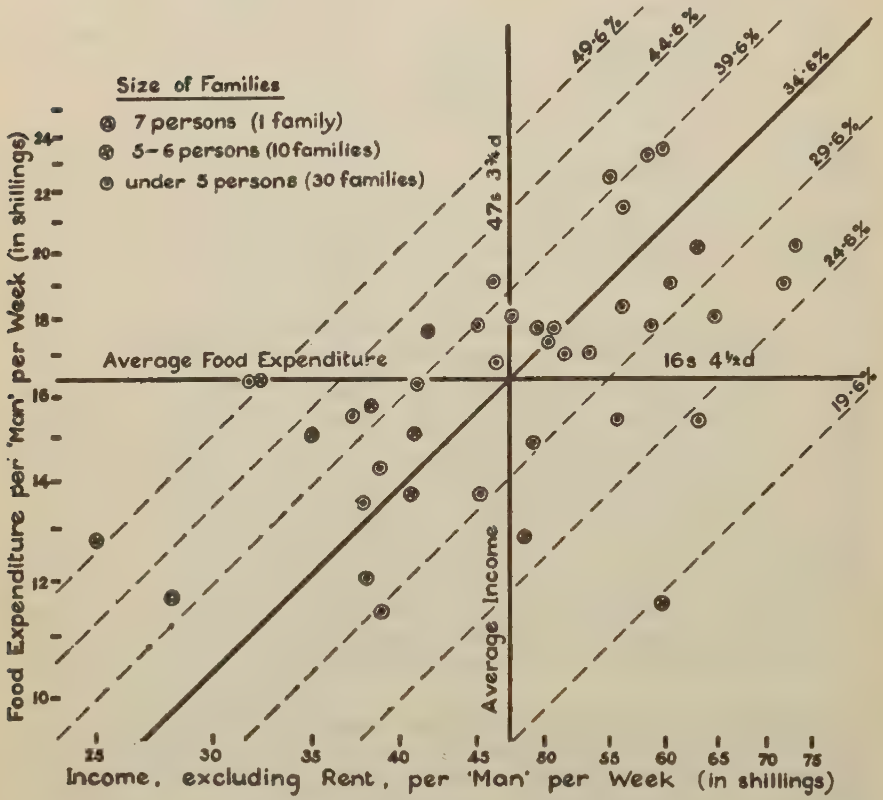
Diagram A and Diagram B are identical, and the families that stated their income are found in both along the same horizontal lines. Thus, *e.g.*, the family consisting of 5 or 6 persons and with a food expenditure of about 11s. 6d. per ' man ' per week, that in Diagram A is shown to have spent on food almost 40 per cent of the housekeeping money, is revealed in Diagram B to have used only 19½ per cent of their income[1] for buying food; on the other hand, the family of about similar structure, whose expenditure on food of 16s. 4d. only absorbed a little more than the average proportion of the housekeeping money devoted to the purchase of food by all the families of our sample, actually employed for this purpose 50 per cent of their total income,

---

[1] It should be understood that in this context all our data of income and household expenditure exclude the amounts spent on housing.

DIAGRAM B

INCOME, EXCLUDING RENT, AND FOOD EXPENDITURE
(per 'Man' per Week. Log Scales. 41 Families)



[The percentage figures on the diagonals measure the proportion of the income, *excluding all expenditure on housing*, that went to purchase food.]

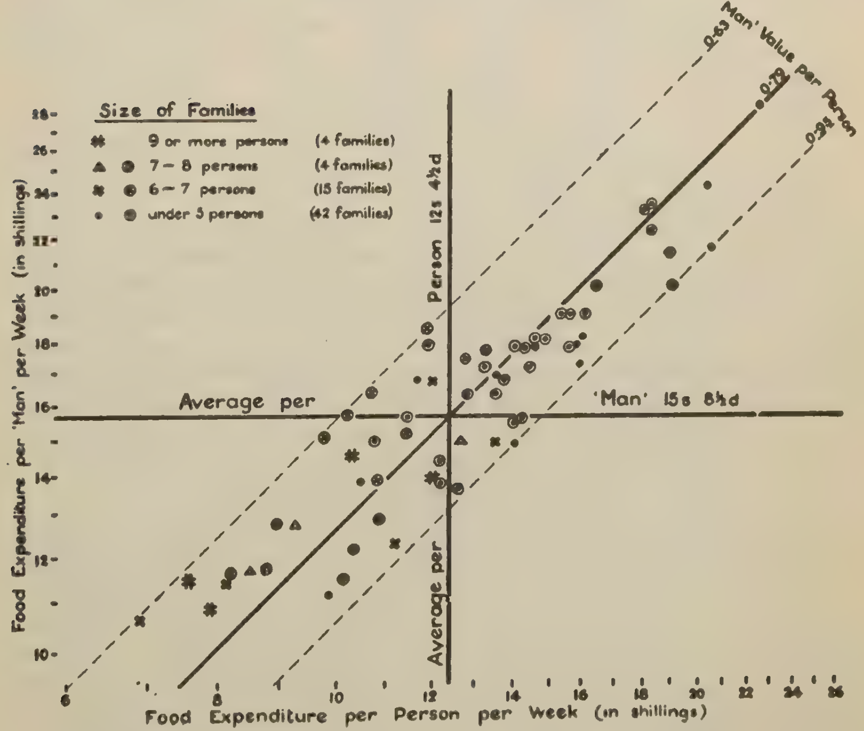
while the average outlay of the 41 families that stated their income amounted to only 34.6 per cent. In general, the very wide dispersion of the proportionate outlay on food in relation to household expenditure—the figures for the 65 families cover a range from approximately 27 per cent to 81 per cent—clearly indicates the unreliability of general figures of household expenditure as a measure of the standard of living. The figures expressing food expenditure as a percentage of income, in Diagram B, are concentrated in a much smaller area, and about three-fifths of the families are grouped within the range from 30 per cent to 40 per cent, that centres around the average.

THE NEED FOR STANDARDIZATION

Diagram C will make it clear why we considered it necessary to standardize our figures of expenditure by means of ' man ' values instead of simply calculating them per head. There can of course be no doubt that the needs of the baby in arms and, say, of the bread winner, differ widely in terms of cost; but when taking the family as the unit of expenditure the question arises whether for individual families these differences are sufficiently large to justify the introduction of the artificial unit ' man ' in lieu of the natural unit ' person '. The figures of ' man ' values shown in Table I only vary from 0.72 to 0.84. They however already represent averages for groups of families; the average range of ' man ' values per person of the 65 families of

DIAGRAM C

FOOD EXPENDITURE PER WEEK & SIZE & STRUCTURE OF FAMILIES
(Logarithmic Scales. 65 Families)



[The symbols surrounded by circles indicate the families that also stated their full income. The diagonals show the range of ' man ' values per person of the 65 families (300 persons), and the average ' man ' value of the 300 persons.]

our sample for 1948, was found to reach from 0.63 to 0.95. What this means in terms of food expenditure per head as compared with food expenditure per 'man', is demonstrated in Diagram C. The vertical scale in Diagram C is again identical with the vertical scales in Diagrams A and B, measuring the food expenditure per 'man', while the horizontal scale measures the food expenditure per person. The central diagonal indicates the position of all those families whose 'man' value per person corresponds to the average 'man' value per person of all the 65 families, *viz.*, 0.79. Above and below this central diagonal lie two auxiliary diagonals which mark off the whole range of 'man' values from 0.63 to 0.95. These cut the horizontal line of average expenditure per 'man' per week at points through which we could draw verticals in order to translate the average food expenditure per person of the average 'man' value of 0.79, into the food expenditure of persons with a 'man' value of 0.63 and of 0.95. These distances from the true average of 12s. 4½d. indicate how greatly the picture would be distorted by simply comparing the food expenditure per person of the different families instead of resorting to a standardization by means of 'man' values. For although a fairly narrow modal range of 'man' values—from, say, 0.76 to 0.84—can be discerned, quite a few of the families fall outside it.

FAMILY INCOME AND THE HOUSEWIFE

The figures of average expenditure for 1947 and 1948 in Table I are not, of course, directly comparable, since the samples for these two years only comprise in part identical families; a direct comparison is obviously only possible with respect to the sub-sample of unchanged families. Such a comparison is made on broad lines in Table IV, showing the household expenditure per 'man' per week subdivided into outlay on food, housing, clothing, fuel and lighting, and miscellaneous items, first for the 35 unchanged families in 1947 and 1948, and finally for all the 65 families that constitute the sample for 1948. In comparing the household outlay of the unchanged families in 1947 and 1948, it should be borne in mind that, as is shown by the analysis

TABLE IV

Distribution of Household Expenditure

Per 'Man' per Week	Unchanged Families (35)				All Families (65)	
	1947		1948		1948	
	s.	d.	s.	d.	s.	d.
Food	15	6	15	0	15	8½
Housing [1]	3	10¾	3	7	3	5
Clothing	3	2¾	3	1¼	3	1½
Fuel and Lighting	2	1	2	5	2	7½
Miscellaneous	8	10	9	8½	9	8¼
Total per 'Man' per Week	33	6½	33	9¾	34	6¾
Total per Family per Week	123	4½	127	7	125	6¼

[1] Rent, rates, mortgage interest, and house purchase instalments.

of the structure of these families in 1947 and 1948 (Table V), their man value had risen from 0.77 to 0.79, or, more precisely, by 2.1 per cent. Hence the apparent discrepancy between the rise in the household outlay per ‘ man ’, of less than 1 per cent, and per family, of over 3 per cent. Since the unchanged families numbered 4.8 persons per family while all the 65 families or our sample for 1948 had only 4.6 persons per family, the average household expenditure per family of the whole sample was somewhat lower than the average household expenditure per unchanged family in 1948, although the picture is reversed if the expenditure is calculated per ‘ man ’.

TABLE V

Average Structure of Families

	Age Group	Unchanged Families (35)		Changed Families (9)		New Families (21)	All Families (65)
		1947	1948	1947	1948	1948	1948
Males	... 18 & over	1.11	1.14	1.11	1.78	1.19	1.25
Females	... 18 & over	1.11	1.11	1.22	1.00	1.19	1.12
Males	... 15—17	0.17	0.26	0.33	—	0.05	0.15
Females	... 15—17	0.26	0.31	—	—	0.14	0.22
Children	... 6—14	1.49	1.52	0.67	0.89	1.33	1.37
Children	... under 6	0.66	0.46	0.56	0.44	0.62	0.51
Persons per Family		4.80	4.80	3.89	4.11	4.52	4.62
‘Man’ Value per Person		*0.77*	*0.79*	*0.82*	*0.82*	*0.77*	*0.79*

In order to consider in some detail the relation of household expenditure to income, we have divided our total sample for 1948 into the accounts from the 41 families that stated their total income and those from the remaining 24 families that only revealed their household expenditure. By family income, we shall here always understand *net income*, consisting of all the earnings excluding deductions made at work (P.A.Y.E., compulsory insurances, and trade union contributions). Pensions and children’s allowances, as well as the wages of all subsidiary earners, are treated as part of the family income.

A noticeable difference is shown in the average structures of the families of these two sub-samples (Tables VI and VII); for while the average number of persons per family stating their income—group I—only amounted to 4.12, that of the remaining 24 families—group H—was 5.46. This latter group not only contained more persons but also substantially more earners per family than group I, a family in group H having on the average 2.11 earners as against the 1.34 earners per family in group I. These differences in structure seem to be characteristic; for it appears to be far more usual for a housewife of a numerous family to be ignorant of the total income than for a housewife of a small family, in particular if that family has only one earner. It is worth noting that the proportion of earners to non-earners is substantially higher in group H than in group I, *viz.*, 0.60:1 in the former, and only 0.48:1 in the latter. If, however, we only consider the earners aged 18 years and over, most of whom are likely to obtain a full adult wage, the proportions of such earners

TABLE VI

Average Structure of Families Stating Income (Group I)

	15 Unchanged Families 1947	15 Unchanged Families 1948	All Families Group *I* (41) 1948
Earners, 18 and over			
Male	1.07	1.07	1.12
Female [1]	0.03	0.07	0.12
Earners, 16—18			
Male	0.07	0.13	0.05
Female	—	—	0.05
Earners, under 16	—	—	—
Non-earning Adults	0.97	0.93	0.93
Dependent Children[2]	2.06	2.00	1.85
Persons per Family	4.20	4.20	4.12
'Man' Value per Person	*0.77*	*0.79*	*0.79*

[1] A housewife working part-time is counted at half an earner.
[2] Including dependent children over 14 years of age.

TABLE VII

Average Structure of Families Stating Household Expenditure Only (Group H)

	11 Unchanged Families 1947	11 Unchanged Families 1948	All Families in Group *H* (24) 1948
Earners, 18 and over			
Male	1.09	1.18	1.42
Female [1]	0.23	0.27	0.23
Earners, 16—18			
Male	0.09	0.27	0.12
Female	0.36	0.27	0.17
Earners, under 16	0.27	0.27	0.17
Non-earning Adults	1.14	1.09	1.02
Dependent Children[2]	2.73	2.56	2.33
Persons per Family	5.91	5.91	5.46
'Man' Value per Person	*0.77*	*0.79*	*0.79*

[1] A housewife working part-time is counted as half an earner.
[2] Including dependent children over 14 years of age.

to non-earners are, in group H, 0.49:1 and in group I, 0.44:1. The position is reversed slightly if we omit all female earners and only allow for the male earners aged 18 years and over, of which there were 0.45 to one non-earner in group I and 0.42 to one non-earner in group H.

There is therefore no *prima facie* case for assuming that the families in the one group were on the whole worse off than those in the other; yet when we compare the figures of household expenditure of these two groups we find between them a marked difference. On food, the families in group H only spent 14s. 10½d. per 'man' per week, while those in group I spent 16s. 4½d. The families in group H also spent less per family on housing but slightly more on fuel than the families in group I; a correct picture of the cost of these two items can, of course, only be obtained if they are calculated per family and not per 'man' or per person. Outlay *out of housekeeping* *money* on clothing as well as on miscellaneous items usually tends to decrease as the number of earners in a family increases, since earners and in particular earners in the higher age groups, mostly pay out of their pocket money for their personal requirements. The rise in the net income of the 15 unchanged families, by about 19s. per family per week (Table VIII) was due to three causes: first, three of the main earners worked at places where a bonus scheme was in operation, which in 1948 considerably raised their income; secondly, there were more juvenile earners in 1948 than in 1947; and, thirdly, the wages of two of the juveniles who in 1947 were only apprentices, had gone up steeply.

TABLE VIII

Expenditure of Income of 41 Families (Group I)

	15 Unchanged Families		All Families in Group *I* (41)
	1947 s. d.	1948 s. d.	1948 s. d.
	Per 'Man' per Week		P. 'Man' p. Week.
Food	16 1½	16 8½	16 4½
Housing	5 4½	4 11½	4 0¼
Clothing	5 1	4 6¼	3 5¾
Fuel and Lighting	2 9	2 9¼	2 10¼
Miscellaneous	12 0¾	12 10¾	11 5
Total Household Expenditure ...	41 4¾	41 10¼	38 1¾
Regular Savings¹	1 2	1 5¾	1 8½
Unspecified...	6 11½	10 7¾	11 6¼
Total *Net* Income ²	49 6¼	53 11¾	51 4½
	Per Family per Week		P. Family p. Week
Total *Net* Income ²	159 3½	178 3	166 6
Housing	17 3¼	16 5	13 0½
Fuel and Lighting	8 10	9 1¾	9 3
Total Household Expenditure ...	133 1½	138 2¾	123 8½

Relative Expenditure of Income

	15 Unchanged Families				All Families in Group *I* (41)	
	1947		1948		1948	
Food	38.9	32.6	39.9	31.0	43.0	31.9
Housing	13.0	10.8	11.9	9.2	10.5	7.8
Clothing	12.3	10.3	10.8	8.4	9.1	6.8
Fuel and Lighting	6.6	5.5	6.6	5.1	7.5	5.6
Miscellaneous	29.2	24.4	30.8	23.9	29.9	22.2
Total Household Expenditure ...	100.0	83.6	100.0	77.6	100.0	74.3
Regular Savings ¹...		2.4		2.7		3.3
Unspecified...		14.0		19.7		22.4
Total *Net* Income ²		100.0		100.0		100.0

---

[1] Out of housekeeping money; *viz.*, by housewives and children at school.

[2] Excluding direct taxes, compulsory insurances, and contributions to Trade Unions. Family allowances are included.

TABLE IX

Expenditure of Housekeeping Money of 24 Families (Group H)

	11 Unchanged Families 1947 s. d.	11 Unchanged Families 1948 s. d.	All Families in Group *H* (24) 1948 s. d.
	Per 'Man' per Week		P. 'Man' p. Week
Food	14 7	13 5¼	14 10¼
Housing	2 5¾	2 5	2 7½
Clothing	1 10	1 11	2 8½
Fuel and Lighting	1 9¾	2 1¾	2 3¾
Miscellaneous	5 5¾	6 5¾	7 5¼
Total Household Expenditure ...	26 2¼	26 4¾	29 11¼
Regular Savings[1]	6½	2¼	5¾
	Per Family per Week		P. Family p. Week
Housing	11 3½	11 4	11 3¾
Fuel and Lighting	8 3½	10 0¼	9 11
Total Household Expenditure ...	119 3¼	123 7½	128 7¾

Relative Expenditure of Housekeeping Money

	11 Unchanged Families 1947	11 Unchanged Families 1948	All Families in Group *H* (24) 1948
Food	55.6	50.9	48.7
Housing	9.5	9.2	8.5
Clothing	7.0	7.2	10.4
Fuel and Lighting	7.0	8.1	7.4
Miscellaneous	20.9	24.6	25.0
Total Household Expenditure ...	100.0	100.0	100.0

[1] Out of housekeeping money; *viz.*, by housewives and children at school.

It will be noticed that the unchanged families in group I and group H add up to only 26. The remaining 9 unchanged families only supplied statements of their income in 1948, and the data obtained from them could therefore be included only in the totals from which the averages for the whole group I are derived. Of the changed families, 5 stated their income and 4 did not; but there seemed to be no point in showing separate figures for these few families, which, therefore, are merged into the totals on which are based the averages for group I and group H.

EXPENDITURE ON NON-FOOD ITEMS

1. *Housing*

In Table I we saw that the average weekly cost of rent and rates of the 46 families of our sample for 1948 that lived in rented accommodation, was 12s. 7d. In 1947, the average found for 133 families, was 13s. 3d. A better comparison of the cost of housing in 1947 and 1948 is possible if we only consider the outlay of the unchanged and changed families. In both years, 28 of the 44 families in these two groups rented their accommodation, paying on the average per week, 13s. 1¾d. in 1947, and 12s. 5d. in 1948. Two of these families, however, had reduced the cost of their rent in 1948 through sub-letting. If we omit these two families, the average weekly cost of rent and rates of the remaining 26 families was 12s. 6d. in 1947, and 12s. 3½d. in 1948, the decline in cost amounting to just over 1½ per cent. There was, in fact, a reduction in many local rates between 1947 and 1948, and the Ministry of Labour index showed a decline in the cost of rent and rates between June 1947 and August–November 1948, of about 0.6 per cent.

The families that in 1948 either owned or were purchasing the house in which they lived, paid on the average approximately as much as those that rented it—12s. 8d., as compared with 12s. 7d. The amounts paid out by different families varied, however, widely. Some idea of this will be gained from Table X. We there distinguish between rented and other accommodation, and show the relation of expenditure on housing per family to expenditure on food per ' man '. It is somewhat striking that none of the families that either owned or were purchasing their house, spent on food more than about a pound per ' man ' per week, while about a fifth of th families that rented their accommodation, were spending more than this It would seem that there were relatively more economical families amongs those that either had achieved, or were trying to achieve, house ownershi since the relatively lower expenditure on food of these families was certainl not due to a generally higher outlay on housing.[1]

TABLE X

Outlay on Food and Housing

Outlay on Food per ' Man ' per Week (in shillings)	Cost of Accommodation per Family per Week: under 10s. R[1]	under 10s. *O*[2]	10s.—15s. R	10s.—15s. *O*	15s.—20s. R	15s.—20s. *O*	20s. & over R	20s. & over *O*	Total R	Total *O*
	Numbers of Families									
10—12	2	*1*	3	—	1	—	1	—	7	*1*
12—14	1	—	4	—	1	*2*	1	*1*	7	*3*
14—16	1	*3*	5	—	1	*1*	—	*1*	7	*5*
16—18	4	*3*	7	*2*	1	*1*	—	—	12	*6*
18—20	1	*1*	2	*1*	1	—	—	*1*	4	*3*
20—22	—	—	2	—	1	—	1	—	4	—
22—24	2	—	—	—	1	—	—	—	3	—
24 and over	—	—	2	—	—	—	—	—	2	—
Total	11	*8*	25	*3*	7	*4*	3	*3*	46	*18*[3]

[1] R indicates rented accommodation.

[2] *O* indicates *ownership* (or purchase) of house.

[3] One family omitted, since the amount spent by the husband on house purchase and rates was unknown to the housewife.

2. *Clothing*

There was little difference in the outlay on clothing of the families of ou samples in 1947 and 1948. In 1947, the 35 unchanged families spent on out of housekeeping money, per ' man ' per week, 3s. 2½d., and in 194 3s. 1¼d. (Table IV). Or, if we calculate the outlay on clothing per person–

---

[1] This seems a reasonable assumption ; for although when there was no shortage houses, the cost of house-ownership was on the whole not greater than the cost of rente accommodation, some initial capital was required for it, which in most working class fam lies could be obtained only through thrift.

thus obviating the apparent rise in the size of these families from 1947 to 1948, owing to a rise in their 'man' values—the weekly cost was 2s. 5¾d. in 1947, and 2s. 5d. in 1948.

In Tables XI and XII we have analysed the expenditure on clothing per family with respect to payments into clothing clubs—generally some form of purchases by instalments—and cash purchases. In Table XI we give the figures of average weekly expenditure per family for the whole group of families, while in Table XII we show the average weekly expenditure only for those families that actually recorded an expenditure. Thus, 14 of the 35 unchanged families made weekly payments into clothing clubs in 1947 as well as in 1948, while out of the total 65 families in 1948, payments into clothing clubs were made by 26 families. Purchases paid for out of savings were disregarded by us, since they would have distorted our picture of household expenditure. The figures in Tables XI and XII suggest that there may have been some increase in the purchase of clothing by instalments, between the summer of 1947 and the autumn of 1948.

TABLE XI

Clothing Expenditure per Family per Week

Group of Families		Clubs s. d.	Cash Purchases s. d.	Total s. d.
35 Unchanged Families	1947	1 11¼	9 11¾	11 11
	1948	2 4½	9 4	11 8½
All Families (65)	1948	2 7	8 9½	11 4½

TABLE XII

Clothing Expenditure per Family Buying per Week

Group of Families		Clubs		Cash Purchases		Total	
		No. of Families Buying	Actual Outlay s. d.	No. of Families Buying	Actual Outlay s. d.	No. of Families Buying	Actual Outlay s. d.
35 Unchanged Families	1947	14	4 9¼	33	10 7	33	12 7½
	1948	14	5 11½	31	10 6½	31	13 1¼
All Families (65)	1948	26	6 5½	61	9 4½	61	12 1½

3. *Fuel and Lighting*

The outlay on fuel and lighting of the 35 unchanged families was 7s. 8¼d. per family per week in the summer of 1947, and 9s. 1¼d. in the autumn of 1948, which is an increase by nearly 18½ per cent. This rise in expenditure can however only be partly attributed to seasonal fluctuations; for from June 1947 to August–November 1948, the Ministry of Labour index of the cost of fuel and lighting, went up by approximately 11½ per cent; in particular, there was a steep rise in the cost of coal and coke, for which unfortunately no Ministry of Labour figures covering the whole period are available. It will be seen in Table XIII that the outlay in 1948, of the 35 unchanged families

TABLE XIII

Outlay on Fuel and Lighting

	Per Family per Week Unchangd. Fams. (35) 1947	 1948	 All Fams. (65) 1948
	s. d.	s. d.	s. d.
Coal	3 0	4 2	4 2½
Gas	2 9½	3 0	3 3
Electricity	1 3¾	1 6¼	1 8
Other	7	5	4½
Total	7 8¼	9 1¼	9 6

and of all the 65 families, on coal, gas, and electricity, only differs by small amounts, which allows of the assumption that for the type of families included in our sample, the figures are fairly characteristic.

4. *Miscellaneous Items*

In Tables VIII and IX, we saw that the outlay on miscellaneous items per 'man' per week amounted to 11s. 5d. in the families that stated their income, but to only 7s. 5¼d. in those that only stated their household expenditure. This discrepancy in the outlay on miscellaneous items also occurred in previous years; it suggests that when the housewife is ignorant of the income of her family, the field of her purchases is much more narrowly circumscribed, and most—if not all—the earners' personal requirements are bought by them with the money they retain.

The outlay on miscellaneous items can broadly be subdivided into two main groups, the one comprising expenditure on household requirements and including instalments on furniture and bedding, and the other the outlay on what may be termed 'personal' requirements, such as expenditure on drink, tobacco, newspapers, voluntary insurances, education, amusements, etc. The figures in Table XIV show that in 1948 roughly five-sixths of the total outlay on miscellaneous items by the families of our sample, was on personal requirements. The average amounts disbursed on instalments per family per week were very small; but, of course, only some of the families were actually buying furniture and other household requirements in this way. Instalment payments were recorded by 12 of the 65 families of our sample for

TABLE XIV

Expenditure on Miscellaneous Items per Family per Week

Group of Families		Household Instal-ments	 Other	Personal	Total
		s. d.	s. d.	s. d.	s. d.
35 Unchanged Families	1947 ...	1 2¼	3 5½	28 0¼	32 8
	1948 ...	1 10¼	4 10½	29 10¾	36 7½
All Families (65)	1948 ...	1 6	4 6¼	29 1½	35 1¾

1948; of these, seven were unchanged families that also bought household requirements on instalments in 1947. Their average payments amounted to 5s. 11¼d. per week in 1947 and 9s. 3¼d. in 1948; the average amounts spent in 1948 by all the 12 families, was 7s. 3¼d. per week. Here again we encounter the picture of an increased expenditure on instalments in 1948, which we have already met with when considering the payments into clothing clubs. Eight of the twelve families in 1948 that paid instalments on furniture also made payments into clothing clubs, the outlay on both these items together amounting to 16s. 2¼d. per week for each of these families.

Only some types of expenditure on personal items were sufficiently common amongst the families of our sample to enable us to summarize them in order to obtain figures of average expenditure. These were the outlay on drink, tobacco—practically always cigarettes—newspapers, amusements, and voluntary insurances. In Table XV we first show the average outlay on these items, per family per week, for all the families of the sample, and, secondly, the average outlay by those families that actually recorded any, the Table also giving the number of families that did so. The figures of expenditure in Table XV only refer to those purchases that were made out of housekeeping money; this in particular explains the small outlay on drink, which in fact largely represents the purchase of non-alcoholic drinks. It will

TABLE XV

Expenditure on Certain Miscellaneous Items out of Housekeeping Money

	Per Family per Week					
	Income Stated (Group *I*)			Housekeeping Money Only (Group *H*)		
	15 Unchanged Fams.		All Fams. (41)	11 Unchanged Fams.		All Fams. (24)
	1947	1948	1948	1947	1948	1948
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Drink	1 10	1 2¾	11½	1 2¾	1 9½	1 0¾
Tobacco	8 6	10 10¾	8 8¼	2 5¼	5 7	5 11½
Newspaper	1 7½	1 9¾	1 10¼	1 6	2 3	1 11½
Amusements ...	5 4	6 3¼	5 3¼	2 8	4 7¼	4 3½
Insurances[1]	4 5¼	4 2	4 3¼	4 3¼	4 9½	4 8¾
Total	21 8¾	24 4½	21 0½	12 1¼	19 0¼	18 0
	Numbers of Families Actually Buying					
Drink	11	8	23	7	5	11
Tobacco	13	12	27	5	5	14
Newspapers ...	15	15	40	10	10	23
Amusements ...	14	13	37	7	8	19
Insurances[1]	14	15	41	10	11	23
	Average Weekly Outlay per Family Buying					
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Drink	2 6	2 3½	1 8¼	1 11¼	3 11½	2 4
Tobacco	9 9½	13 7½	13 2¼	5 4½	12 3¼	10 2¾
Newspapers ...	1 7½	1 9¾	1 11	1 7¾	2 5¾	2 0½
Amusements ...	5 8½	7 2¾	5 10¼	4 2¼	6 3¾	5 5
Insurances[1]	4 9	4 2	4 3¼	4 8½	4 9½	4 11½

[1] Excluding compulsory insurances.

be noted that the average outlay on tobacco of the families that stated their income as well as of those that only stated their household expenditure, was higher in 1948 than it had been in 1947, which may perhaps be taken as an indication that as the earnings of juveniles increase so does—up to a point—the families' expenditure on tobacco.

No housewife paid for or knew the earners' outlay on drink (in two of the 65 families, the earners neither drank nor smoked), and only a few recorded any outlay on earners' amusements. Nearly all the housewives paid regularly for newspapers and, also, for some periodicals, but the figures of outlay that appeared in their accounts probably excluded the cost of evening papers bought from street vendors. All but one of the 65 families paid for some form of voluntary insurance.

CONCLUSION

Although the figures obtained from our small sample for 1948 seem to fit in well with those derived in previous years from substantially larger samples, they can obviously form the basis for only very tentative generalizations. The changes which they suggest in the expenditure pattern of 1947 are not large. Outlay on fuel and lighting was higher, mainly on account of a steep rise in cost. A decrease in local rates lead to a slight decline in the cost of housing. More clothing and household equipment appears to have been bought on instalments in 1948 than in 1947. A gradual rise in family income was not reflected in a proportionate rise in housekeeping money, and a somewhat higher expenditure by the housewives on non-food items was accordingly accompanied by a slightly lower expenditure on food.

In a second paper we shall deal more specifically with the outlay on food and its nutritional aspect.

T. SCHULZ.

APPENDIX

UNITED KINGDOM STATISTICS

DERIVED SERIES

	Annual Averages			1949						1950
	1947	1948	1949	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
1. Working-class cost of living (1937–8=100)										
(*a*) Food	138[1]	149	158	160	160	161	164	164	165	166
(*b*) All Items	161–2[1]	174	179	180	180	180	181	181	182	182
2. Middle-class cost of living (1938=100)	182[1]	195	200	201	201	201	201	202	202	202
3. Seasonally corrected Index of Industrial Production (1946=100)	108	121	129	125	130	131	130	133	(133)	...
4. Seasonally corrected Coal Statistics (Annual rates, millions of tons)										
(*a*) Total Production ...	197	208[2]	215	200	216	214	214	219	223	229
(*b*) Inland Consumption	184	193[2]	195	184	193	190	189	198	200	196
(*c*) Exports and Bunkers[3]	5	16[2]	19	20	18	20	21	25	21	21
(*d*) Total Consumption (b+c)[4]	190	209[2]	214	204	211	210	210	223	221	217
(*e*) Stock changes (a—d)[4]	+8	—1	—	—4	+5	+4	+4	—4	+2	+8

[1] June. [2] 52 weeks. [3] Not seasonally corrected.
[4] Annual totals may not be the sum of items, because of rounding.

Details of derivation :—

1. Working-class cost of living. BULLETIN, Vol. 10, p. 140.
2. Middle-class cost of living. BULLETIN, Vol. 11, p. 133.
3. Seasonal Correction of Industrial Production. BULLETIN, Vol. 11, p. 100.
4. Seasonal Correction of Coal Statistics. BULLETIN, Vol. 11, p. 141.

D.S.